

1. Identification

Product identifier 896-2555 CHROMA-CHEM® LEAD FREE MEDIUM YELLOW AMY

Other means of identification

SAP Specification 000000139360

Recommended use Aqueous industrial colorant

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Chromaflo Technologies Corporation
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Ashtabula, OH 44005-0816
USA

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3E CONTRACT # 12154

3E ACCESS CODE 334294

CANADA: CANUTEC 613-996-6666

EMERGENCY NUMBER

Product Regulatory Services ehs_americas@chromaflo.com

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Reproductive toxicity (the unborn child) Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Causes skin irritation. Causes serious eye irritation. Suspected of damaging the unborn child.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	If product is in liquid or paste form, hazards related to dust are not considered significant. But product may contain substances that could be potential hazards if caused to become airborne due to abrasive processes.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Titanium dioxide		13463-67-7	10 - 20
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether		111-77-3	2.5 - 10
2-butoxyethanol; ethylene glycol monobutyl ether		111-76-2	1 - 2.5
2-dimethylaminoethanol; N,N-dimethylethanolamine		108-01-0	1 - 2.5
Other components below reportable levels			60 - 80

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions**7. Handling and storage****Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	PEL	240 mg/m3	
Titanium dioxide (CAS 13463-67-7)	PEL	50 ppm 15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	TWA	20 ppm
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	TWA	24 mg/m3 5 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Use a NIOSH/MSHA approved respirator if there is a risk of exposure to vapor/mist at levels exceeding the exposure limits.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Yellow.

Odor Characteristic.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range > 212 °F (> 100 °C)

Flash point > 205.0 °F (> 96.1 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density 1.3

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known. Diarylide pigments in this product may thermally decompose in polymeric resin applications when processed at temperatures exceeding 200 C (392 F). Decomposition products may include various monoazo dyes, hydrocyanic acid, and aromatic amines including 3,3'-dichlorobenzidine (an IARC Group 2B carcinogen).

11. Toxicological information

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

Skin contact Causes skin irritation.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Eye contact Causes serious eye irritation.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
896-2555 CHROMA-CHEM® LEAD FREE MEDIUM YELLOW	AMY	
Acute		
Dermal		
LD50	Rabbit	22360 ml/kg estimated 18383 mg/kg estimated
Inhalation		
LC50	Mouse	39492 ppm, 7 Hours estimated
	Rat	24879 ppm, 4 Hours estimated
LD50	Guinea pig	3090 mg/l estimated
	Rabbit	4076 mg/l estimated
	Rat	2981 mg/l estimated
Oral		
LD50	Guinea pig	36 g/kg estimated
	Mouse	68 g/kg estimated
	Rabbit	16 g/kg estimated
	Rat	23373 mg/kg estimated

Components	Species	Test Results
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)		
Acute		
Dermal		
LD50	Rabbit	6540 mg/kg
Oral		
LD50	Guinea pig	4160 mg/kg
		4.16 g/kg
	Mouse	8222 mg/kg
	Rabbit	7.19 g/kg
	Rat	5500 mg/kg
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)		
Acute		
Dermal		
LD50	Rabbit	400 mg/kg
Inhalation		
LC50	Mouse	700 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
Oral		
LD50	Guinea pig	1.2 g/kg
	Mouse	1.2 g/kg
	Rabbit	0.32 g/kg
	Rat	560 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

Titanium dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	May be harmful if absorbed through skin. Prolonged inhalation may be harmful.
	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
	Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species		Test Results
896-2555 CHROMA-CHEM® LEAD FREE MEDIUM YELLOW	AMY		
Aquatic			
Crustacea	EC50	Daphnia	7746.9556 mg/l, 48 hours estimated
Fish	LC50	Fish	6763.6187 mg/l, 96 hours estimated
Components	Species		Test Results
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	7500 mg/l, 96 hours
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Titanium dioxide (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-butoxyethanol; ethylene glycol monobutyl ether 0.83

Mobility in soil

No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not established.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3) Listed.

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2) Listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether	111-77-3	2.5 - 10
2-butoxyethanol; ethylene glycol monobutyl ether	111-76-2	1 - 2.5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US - New Jersey RTK - Substances: Listed substance

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)

2-dimethylaminoethanol; N,N-dimethylethanolamine (CAS 108-01-0)

Titanium dioxide (CAS 13463-67-7)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)

Titanium dioxide (CAS 13463-67-7)

US. Massachusetts RTK - Substance List

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)

2-dimethylaminoethanol; N,N-dimethylethanolamine (CAS 108-01-0)

Titanium dioxide (CAS 13463-67-7)

US. New Jersey Worker and Community Right-to-Know Act

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)

2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)

US. Pennsylvania RTK - Hazardous Substances

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)
2-dimethylaminoethanol; N,N-dimethylethanolamine (CAS 108-01-0)
Titanium dioxide (CAS 13463-67-7)

US. Pennsylvania Worker and Community Right-to-Know Law

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)
2-dimethylaminoethanol; N,N-dimethylethanolamine (CAS 108-01-0)
Titanium dioxide (CAS 13463-67-7)

US. Rhode Island RTK

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (CAS 111-77-3)
2-butoxyethanol; ethylene glycol monobutyl ether (CAS 111-76-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

C.I. Pigment Yellow 83 (CAS 5567-15-7)	Listed: October 1, 1992
Titanium dioxide (CAS 13463-67-7)	Listed: September 2, 2011

US - California Proposition 65 - CRT: Listed date/Developmental toxin

2-ethoxyethanol (CAS 110-80-5)	Listed: January 1, 1989
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US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

2-ethoxyethanol (CAS 110-80-5)	Listed: January 1, 1989
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International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
Taiwan	Taiwan Toxic Chemicals Substances Control Act	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-11-2015

Revision date 10-07-2016

Version # 04

Disclaimer

The information contained herein is based on data believed to be reliable and the manufacturer disclaims any liability incurred from the use or reliance upon the same. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This safety information is not a license to use this material as claimed by any patents of third parties. The user alone must finally determine whether a contemplated use of this material will infringe any such patents, and for obtaining any required licenses.

Revision Information This document has undergone significant changes and should be reviewed in its entirety.